

**DRAFT SCREENING SITE INVESTIGATION
FOR THE
MINK SMELTING AND REFINING WORKS SITE
18TH STREET AND WASHINGTON AVENUE
PHILADELPHIA, PENNSYLVANIA
ECKEL SITE NUMBER 313**

Prepared for

U.S. Environmental Protection Agency Region 3
Hazardous Site Cleanup Division
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1.0 INTRODUCTION

Under Remedial Action Contract (RAC) No. 68-S7-3002, Work Assignment No. 048-PAPA-03ZZ, U.S. Environmental Protection Agency (EPA) Region 3 tasked Tetra Tech, Inc. (Tt), to assist EPA Region 3 in the assessment of properties suspected to have been former lead smelter foundries. Tt subcontracted completion of this work assignment to Tetra Tech EM Inc. (Tetra Tech).

Former lead smelter sites nationwide were identified in an April 2001 article published in the American Journal of Public Health by Eckel, and others (Eckel study) (Reference [Ref.] 1). The majority of these lead smelters operated prior to 1964 and closed before the current environmental regulations were instituted. As part of the Eckel study, soil samples were collected from several of the identified former lead smelter properties. Results from the analysis of these soil samples indicated that concentrations of lead exceeded EPA's recommended screening level for lead in residential soils. The results of the Eckel study indicate that the air disposition of lead into soils from the former smelter operations may present an ongoing public health concern due to exposure of residential populations, especially children, located in the vicinity of these former lead smelters, to soils containing elevated concentrations of lead (Refs. 1, 2, and 3).

The Eckel study identified 77 properties that may have been formerly used as lead smelters within EPA Region 3 (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia). EPA Region 3 is currently investigating these 77 properties. The objective of EPA's investigation of these properties is to (1) determine the potential for lead-contaminated soil to be present at the former lead smelter site or nearby properties (2) identify any populations that may be at risk to exposure to this soil, and (3) determine if soil sampling is warranted at any of these sites or nearby properties.

The following activities were completed as part of the initial screening investigation of each of these former lead smelter sites: (1) verify the former lead smelter address listed in the Eckel

study through historical Sanborn fire insurance maps, tax parcel information, and/or contacting local agencies, (2) determine if the site is listed in EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database, (3) determine through census information and existing maps the number of schools, daycare centers or recreational parks that exist near the former lead smelter site, (4) determine the population residing within a 4-mile radius of the site, (5) conduct a windshield reconnaissance of the site and surrounding area to document the current land use, identify any exposed soil and verify the existence of any schools, daycare centers or parks in the immediate area, and (6) review all information acquired to determine if the collection and analysis of soil samples is warranted at the site or at any nearby property.

This report summarizes the findings of the tasks outlined above for the former lead smelter known as the Mink Smelting and Refining Works site located at the intersection of 18th Street and Washington Avenue, Philadelphia, Pennsylvania, 19146. Each former smelter property was given a number in Eckel's study. The Eckel study number for this site is 313 (Ref. 1).

2.0 SITE LOCATION

The former Mink Smelting and Refining Works facility was located at the intersection of 18th Street and Washington Avenue, Philadelphia, Pennsylvania, 19146. The geographic coordinates of the former Mink Smelting and Refining Works facility are 39° 56' 17" north latitude and 75° 10' 22" west longitude on the Philadelphia, Pennsylvania Quadrangle, 7.5 minute series, United States Geological Survey topographic map (see Appendix A, Figure 1). The site is not currently listed in EPA's CERCLIS database (Ref. 4). An aerial photograph of the vicinity of the former lead smelter site has been included in Appendix A, Figure 2. This aerial photograph reveals the exposed soils and any identified areas of potential concern such as schools, daycare centers, or parks located within a half-mile radius of the site.

3.0 SITE OBSERVATIONS

On December 16, 2005, Tetra Tech completed a non-sampling windshield reconnaissance of the Mink Smelting and Refining Works site and surrounding area. A photographic record of the current site conditions is included in Appendix B. Figure 3, shows the current layout of the site and surrounding area as observed during Tetra Tech's site reconnaissance. The following observations were recorded:

- The former smelter property is located on the northeast corner of the 18th Street and Washington Avenue intersection. Washington Avenue consists of primarily industrial and commercial properties; the surrounding vicinity is primarily residential.
- The property is currently occupied by Jer-Mar Metal Recycling and Acme Metals.
- Directly surrounding the former lead smelter property, to the north, east and west are residential dwellings, to the south is a parking lot and commercial development. On the southwest corner of the 18th Street and Washington Avenue intersection is a baseball field.
- The Edwin M. Stanton Public School is two blocks north of the property. No areas of exposed soil were identified on the public school property.
- No exposed soils were identified on the former lead smelter property. Exposed soils were identified on residential properties in the immediate vicinity of the site.

4.0 POTENTIAL TARGETS

Potential targets identified that may be exposed to lead-contaminated soils remaining in the vicinity of the former Mink Smelting and Refining Works site include the nearby residential population, children attending schools or daycare centers, and visitors to parks or recreational areas. The population within a 4-mile radius of the site is summarized in the table below (Ref. 5).

Population Within a Four-mile Radius of the Site

| Distance Ring (miles) | Population (number of persons) |
|------------------------------|---------------------------------------|
| 0.0 to 0.25 | 4,537 |
| 0.25 to 0.5 | 15,539 |
| 0.5 to 1.0 | 76,110 |
| 1.0 to 2.0 | 143,682 |
| 2.0 to 3.0 | 133,522 |
| 3.0 to 4.0 | 213,818 |

Source: U.S. Department of Commerce. Landview V Environmental Mapping Software based on the Bureau of Census 2000 Population Data. December 6, 2005.

No schools or daycare centers have been identified in the area directly surrounding the site. Seven schools have been identified within one-half mile of the site, including the Stanton School, Barratt Junior High School, Smith Elementary School, Arthur School, Landreth School, Durham School, and Childrens School. No city parks were identified within one-half mile of the site; however a baseball field is located on the southwest corner of the intersection of 18th Street and Washington Avenue.

5.0 FINDINGS AND RECOMMENDATIONS

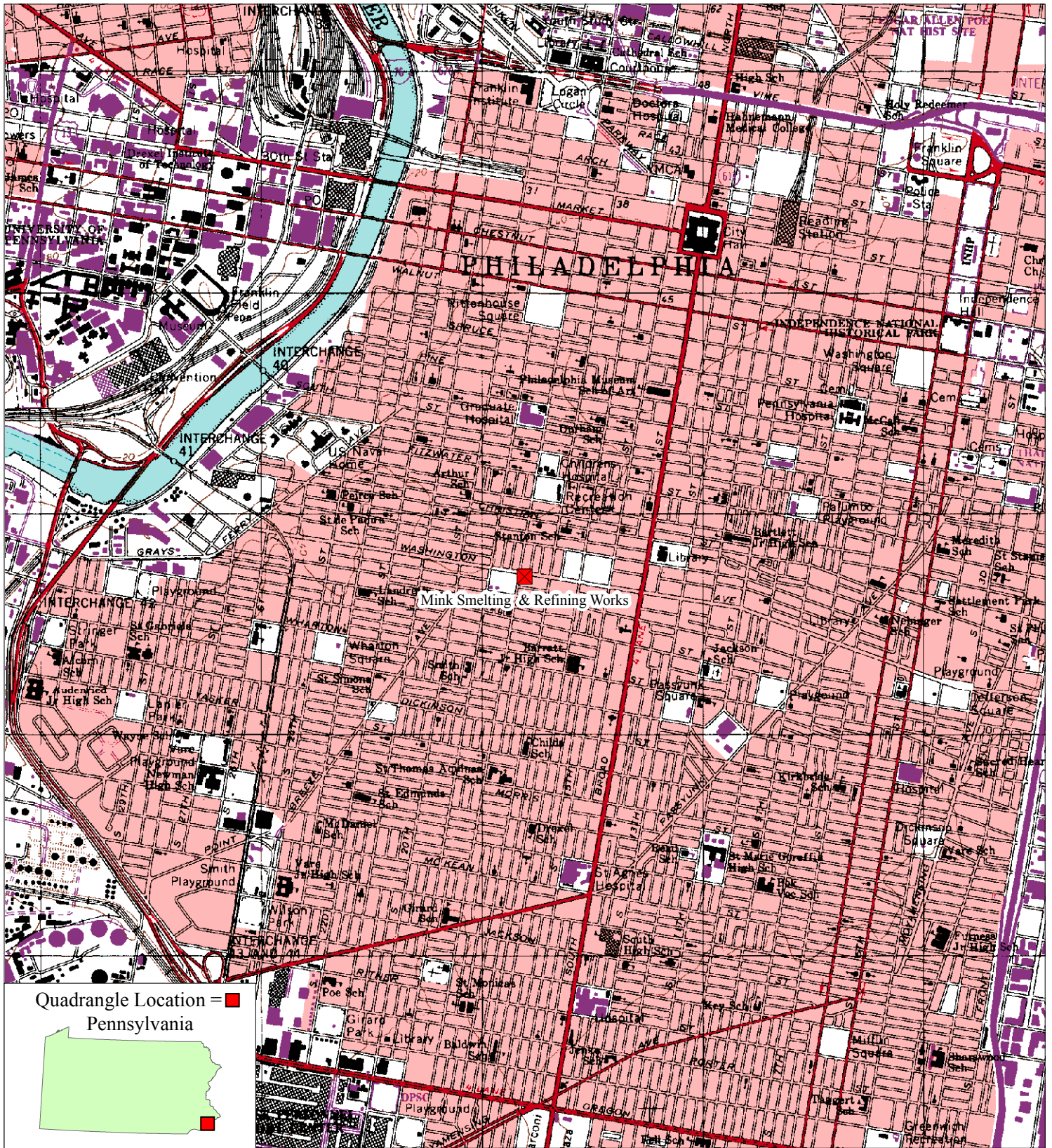
The property is located in a mixed industrial, commercial, residential area of south Philadelphia. Exposed soils were observed in areas directly surrounding the site. A baseball field is located in close proximity to the former lead smelter site. No schools or daycare facilities were identified in the immediate vicinity of the site. To determine if there is a threat to the residential population and people using the baseball field, it is recommended that soil samples be collected from residential yards and the baseball field and analyzed for lead levels.

REFERENCES

1. Eckel, W.P., Rabinowitz, M.B., Foster, G.D. American Journal of Public Health.
“Discovering Unrecognized Lead-Smelting Sites by Historical Methods”. April 2001.
2. Pennsylvania Department of Health. Suspected Former Lead Smelter Sites: A Potential Risk Factor for Childhood Lead Poisoning. August 2004.
3. U.S. Environmental Protection Agency (EPA). Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. OSWER Directive 9355.4-12. July 14, 1994.
4. U.S. EPA. Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS) database. On-Line Address:
<http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm>
5. U.S. Census Bureau. State and County Quick Facts. Accessed On-Line on December 6, 2005. On-Line Address: quickfacts.census.gov/qfd/states/42.html.

Appendix A

Figures



Mink Smelting and Refining Works
18th and Washington
Philadelphia, Pennsylvania
Eckel Site No. 313

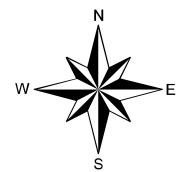
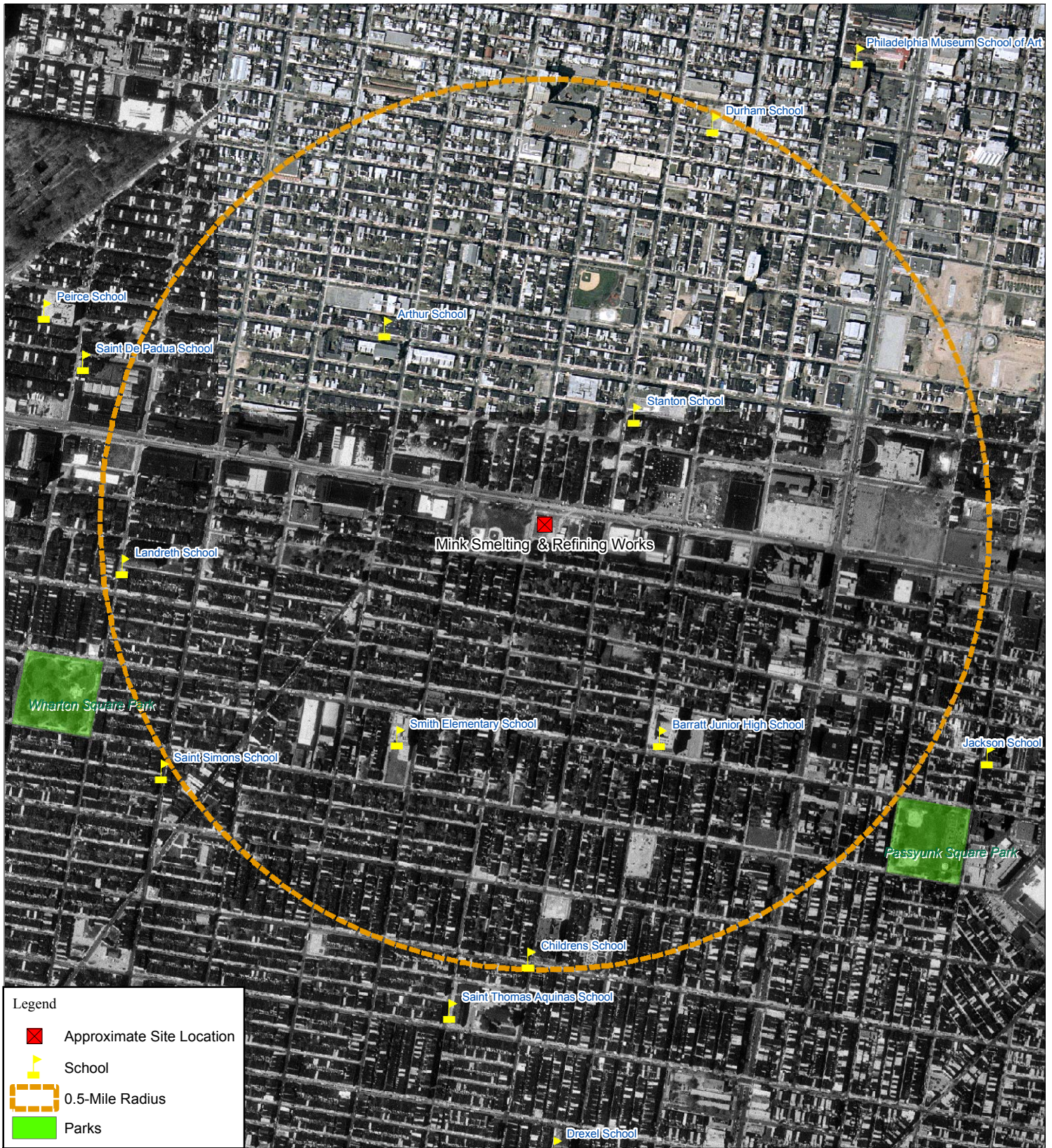


Figure 1
Site Location Map



Source: Modified from USGS, Philadelphia,
Pennsylvania-New Jersey Quadrangle, 1995.



0 400 800 Feet
Scale in Feet

Mink Smelting and Refining Works
18th and Washington
Philadelphia, Pennsylvania
Eckel Site No. 313

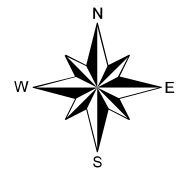


Figure 2
Aerial Photograph



Source: Modified from USGS, 2002, and ESRI, 2005

Appendix B
Photographic Documentation



Photographic Documentation

Site Name: Mink Smelting and Refining Works-Eckel Number 313

Prepared by: Tetra Tech EM Inc.

Location: 18th St and Washington Ave, Philadelphia, Pennsylvania

Photographer: [REDACTED]

Photograph No. 1

Photograph Date: October 13, 2005

Description: View of the former Mink Smelting and Refining Works property facing northeast from 18th Street and Washington Avenue intersection.



Photograph No. 2

Photograph Date: October 13, 2005

Description: Retail stores along the north side of Washington Avenue, west of 18th Street.





Photographic Documentation

Site Name: Mink Smelting and Refining Works-Eckel Number 313

Prepared by: Tetra Tech EM Inc.

Location: 18th St and Washington Ave, Philadelphia, Pennsylvania

Photographer: [REDACTED]

Photograph No. 3

Photograph Date: October 13, 2005

Description: View of 18th Street facing north on Washington Avenue.



Photograph No. 4

Photograph Date: October 13, 2005

Description: Facing south on 18th Street from Washington Avenue. The baseball field located along Washington Avenue is visible on the right-hand side of photograph.





Photographic Documentation

Site Name: Mink Smelting and Refining Works-Eckel Number 313

Prepared by: Tetra Tech EM Inc.

Location: 18th St and Washington Ave, Philadelphia, Pennsylvania

Photographer: [REDACTED]

Photograph No. 5

Photograph Date: October 13, 2005

Description: View of Auto Zone retail store property and baseball field located southwest of the former lead smelter property.

